Module 2 Overview of HIV Prevention in Mothers, Infants and Young Children

Total Time: 145 minutes

SESSION 1 Comprehensive Approach to Reducing HIV Infection in Infants and Young Children

Activity/Method	Resources Needed	Time
Exercise 2.1 Local epidemiology: interactive discussion	None, other than those noted below	20 minutes

SESSION 2 Mother-to-Child Transmission of HIV Infection

Activity/Method	Resources Needed	Time
Exercise 2.2 Local terminology: interactive discussion	None, other than those noted below	20 minutes

SESSION 3 Comprehensive Approach to Prevention of HIV Infection in Infants and Young Children

Activity/Method	Resources Needed	Time
Exercise 2.3 STI handshake: interactive group game	Marked paper strips measuring about 5 x 8 cm. A basket, box, or paper bag to hold paper strips	90 minutes

SESSION 4 Role of Maternal and Child Health Services in the Prevention of HIV Infection in Infants and Young Children

Activity/Method	Resources Needed	Time
Review local PMTCT policies and programmes	Copies of local PMTCT policies if not already in the Participant Manual.	15 minutes

Also have available the following:

- Overheads or PowerPoint slides for this Module (in Presentation Booklet)
- Overhead or LCD projector, extra extension cord/lead
- Flipchart or whiteboard and markers or blackboard and chalk
- Pencil or pen for each participant

Relevant Policies for Inclusion in National Curriculum

Session 3
▪ For Element 3: Prevention of HIV transmission from women infected with HIV to their infants
  ▪ Local/national/regional summary of epidemiology of MTCT
  ▪ Brief introduction to local/national PMTCT policy and programme including PMTCT targets
▪ For Element 4: Provision of treatment, care, and support to women infected with HIV, their infants, and their families
  ▪ Local/national PMTCT-Plus targets
▪ Copies of patient brochures on personal risk reduction strategies (if available)

SESSION 1 Comprehensive Approach to Reducing HIV Infection in Infants and Young Children

Advance Preparation

- Either recruit an expert on local and national epidemiology to present the local HIV and MTCT information or research and develop the presentation yourself.
- Prepare slide(s) on local epidemiology if needed.
- Prepare handout summarising local epidemiology of MTCT if not already in the Participant Manual.

Total Session Time: 20 minutes

Trainer Instructions

Slides 1, 2 and 3

Begin by reviewing the module objectives listed below.

After completing the module, the participant will be able to:

- Describe the comprehensive approach to prevention of HIV infection in infants and young children.
- Discuss mother-to-child transmission (MTCT) of HIV infection.
- Describe the four elements of a comprehensive approach to prevention of HIV infection in infants and young children.
- Describe the role of maternal and child health (MCH) services in the prevention of HIV infection in infants and young children.

Trainer Instructions

Slides 4 and 5

Distribute the handout summarising national and regional epidemiology on HIV and MTCT if it is not already in the Participant Manual.

Introduce local expert OR review country or local data on HIV and MTCT epidemiology.

Facilitate Group Work

Lead interactive discussion on local epidemiology, as described below.

Make These Points

- Discuss local statistics and rates of HIV infection, particularly among pregnant women.
- Discuss how those factors will affect PMTCT services.

Exercise 2.1 Interactive discussion: local epidemiology	
Purpose	To involve the participants in a discussion about local epidemiology.
Duration	10 minutes
Introduction	Ask participants whether they are familiar with local statistics on HIV and MTCT or whether they are surprised by the data.
Activities	Ask the members of the group to tell you what factors they—as individuals and as healthcare workers—think are fuelling the epidemic. Write their responses on the flipchart or board in the front of the room.
Debriefing	Summarise the session by noting that HIV and MTCT are fuelled by a number of individual behaviours, which may be shaped by a range of personal, cultural, political, and legal factors.

Trainer Instructions

Slide 6

Explain that reducing HIV infection in infants and young children requires a multidimensional approach that includes the four elements listed below.

When possible, use local examples to describe the implementation of the four elements.

Make These Points

- Emphasise that HIV prevention efforts reach fewer than one in five people at risk.

Reducing HIV infection in infants and young children requires a comprehensive approach that includes the four elements listed below:

- Element 1: Primary prevention of HIV infection
- Element 2: Prevention of unintended pregnancies among women infected with HIV
- Element 3: Prevention of HIV transmission from women infected with HIV to their infants
- Element 4: Provision of treatment, care, and support to women infected with HIV, their infants, and their families

Make These Points

- Emphasise that access to comprehensive MCH services (ie, antenatal, postnatal, and child health) and HIV testing and counselling is central to any effort to reduce mother-to-child transmission of HIV.
- Discuss the United Nation's (UN) approach to comprehensive prevention of HIV infection in infants and young children.
- Discuss the four elements of a comprehensive approach to PMTCT outlined on Slide 6. The first element focuses on parents-to-be. The second element addresses family planning. The third and fourth elements focus on women who are HIV-infected, their infants, and their families. State that the four elements will be discussed in detail in Session 3 of this module.

Definition

PMTCT (prevention of mother-to-child transmission) is a commonly used term for programmes and interventions designed to reduce the risk of mother-to-child transmission (MTCT) of HIV.

Access to comprehensive MCH services (ie, antenatal, postnatal and child health services) is central to efforts to reduce HIV infection in infants and young children.

The following sessions provide more details on the specific elements of the comprehensive approach.

SESSION 2 Mother-To-Child Transmission of HIV Infection

Advance Preparation

Ask colleagues working in the HIV prevention and care field or any related field to tell you local terms and phrases used to discuss sex, STIs, HIV disease or condoms. Make a list of these terms to use for Exercise 2.2.

Total Session Time: 20 minutes

Trainer Instructions

Slides 7 and 8

Begin this session by emphasising that PMTCT programmes function within region-specific cultural and social contexts. Healthcare workers, patients, and policy makers often use local terminology when discussing HIV/AIDS and related topics. Use the interactive discussion below to define some of the terms used locally.

Exercise 2.2 Interactive discussion: local terminology	
Purpose	To determine local language used in HIV/AIDS prevention, care, and treatment programmes.
Duration	10 minutes
Introduction	HIV disease has fostered the development of a number of words in every language to describe the disease, how it is transmitted, how it is prevented, and those thought to be infected and at risk. Although these terms are at times stigmatising, it is important that as healthcare workers we are familiar with the language used by our patients. Additionally it is important that providers are consistent with their use of words for new concepts.
Activities	In the local language, have the healthcare provider briefly discuss the risks of HIV transmission from a mother to her baby during pregnancy, during labour and delivery, and when breastfeeding—as she would explain these concepts to a patient. Ask the group to identify the words/concepts used locally that are the most useful and clear when working with pregnant women. Concepts where consensus might be important include: window period, condom, HIV, virus, ARVs, replacement feeding, stigma, disclosure. Ask the group to list the words used to describe HIV disease and people who are HIV-infected. Write these words on flipchart; chose the most appropriate words to describe each concept, and agree to use this language to avoid misinformation or stigmatising language.

Debriefing	These concepts can be communicated to pregnant women, even if they had not previously existed in the local language.

Refer to the *Pocket Guide*

Trainer Instructions

Review MTCT, as described below.

The more technical term for MTCT is vertical transmission or perinatal transmission. The majority of children infected with HIV acquire the virus through MTCT.

Use of the term “MTCT” attaches no blame or stigma to the woman who gives birth to a child who is HIV-infected. It does not suggest deliberate transmission by the mother, who is often unaware of her own infection status and unfamiliar with the transmission risk to infants. Use of the term should not obscure the fact that HIV is often introduced into a family through the woman's sexual partner.

MTCT can occur during:

- Pregnancy
- Labour and delivery
- Breastfeeding

Trainer Instructions

Slide 9

Make These Points

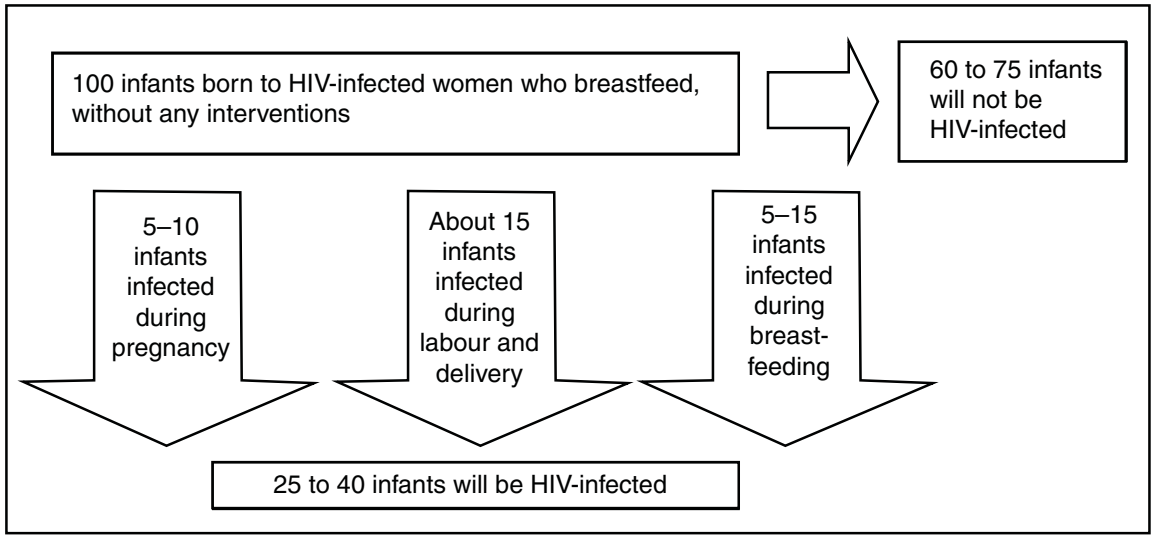
- Emphasise that MTCT may occur during pregnancy, labour, delivery and breastfeeding.
- Point out that without intervention (ARV prophylaxis or treatment) up to 40% of breastfed infants born to mothers infected with HIV can become HIV-infected.

Risk of transmission without interventions

Most transmission occurs during labour and delivery, but depending on breastfeeding practices and duration there is also substantial risk of HIV transmission during breastfeeding.

Figure 2.1 shows that without intervention (ARV prophylaxis or treatment) up to 40% of infants born to mothers infected with HIV who breastfeed can become HIV-infected.

Figure 2.1 HIV Outcomes of Infants Born to Women infected with HIV



Note: Figure 2.1 gives an overall picture of possible outcomes, and there will be variability among different populations.

Trainer Instructions

Slides 10, 11, and 12

Review interventions that decrease the risk of HIV transmission during pregnancy, labour and delivery, and breastfeeding.

Make These Points

Much is known about specific factors that might put a woman at higher risk of transmission, as outlined in the following text and Table 2.1.

- We can use this knowledge to identify interventions to decrease the risk of HIV transmission to the infant during pregnancy, labour, and delivery, and breastfeeding.

Risk factors for transmission

A great deal is known about specific factors that may put a woman at higher risk of transmitting HIV to her infant:

- Viral, maternal, obstetrical, foetal, and infant-related factors all influence the risk of MTCT.
- *The most important risk factor for MTCT is the amount of HIV virus in the mother's blood, known as the viral load. The risk of transmission to the infant is greatest when the viral load is high—which is often the case with recent HIV infection or advanced HIV/AIDS.*

Some of the risk factors for transmission are the same and some are different during pregnancy, labour and delivery, and breastfeeding. These similarities and differences are summarised in Table 2.1.

Table 2.1 Maternal factors that may increase the risk of HIV transmission

Pregnancy	Labour and Delivery	Breastfeeding
▪ High maternal viral load (new or advanced HIV/AIDS) ▪ Viral, bacterial, or parasitic placental infection (eg, malaria) ▪ Sexually transmitted infections (STIs) ▪ Maternal malnutrition (indirect cause)	▪ High maternal viral load (new or advanced HIV/AIDS) ▪ Rupture of membranes more than 4 hours before labour begins ▪ Invasive delivery procedures that increase contact with mother's infected blood or body fluids (eg, episiotomy, foetal scalp monitoring) ▪ First infant in multiple birth ▪ Chorioamnionitis (from untreated STI or other infection)	▪ High maternal viral load (new or advanced HIV/AIDS) ▪ Duration of breastfeeding ▪ Early mixed feeding (eg, food or fluids in addition to breastmilk) ▪ Breast abscesses, nipple fissures, mastitis ▪ Poor maternal nutritional status ▪ Oral disease in the baby (eg, thrush or sores)

Trainer Instructions

Introduce information about the relationship between pregnancy and HIV infection as described below.

HIV and pregnancy

Pregnancy itself does not seem to have an effect on progression of HIV/AIDS. Women with HIV/AIDS, however, are more likely to experience pregnancy-related complications such as premature delivery.

SESSION 3 Comprehensive Approach to Prevention of HIV Infection in Infants and Young Children

Advance Preparation

Verify that a summary of local/national/regional epidemiology as well as a brief introduction to local/national PMTCT programme are included in the Participant Manual. If not, have copies available for distribution. Familiarise yourself with these materials.

For Exercise 2.3 STI handshake: interactive group game, strips of paper will be needed. To determine the number of strips needed, use the following formula:

- Number of strips = total number of participants + 1/3 total number of participants (eg, for 24 participants: 24 + 8 = 32 strips)
- Cut the strips to measure about 5 x 8 cm.
- For groups of fewer than 10 participants, write "HIV" on 1 strip.
- For groups of 10 to 20 participants, write "HIV" on 1 strip and the name of a common local STI on another strip.
- Gather the "extra" strips (1/3 of total number of participants). Remove two strips. Write "condom" on one and "abstinence" on the other and set aside.

Total Session Time: 90 minutes

Trainer Instructions

Slides 13 and 14

Explain that the comprehensive approach to prevention of HIV infection in infants and young children consists of four elements and that each of the four elements will be discussed during this session. Introduce Element 1, as outlined below.

Although PMTCT programmes often focus on ARV prophylaxis, a comprehensive approach to the prevention of HIV infection in infants and young children consists of four elements:

Element 1 Prevention of primary HIV infection

Decreasing the number of mothers infected with HIV is the most effective way of reducing MTCT. HIV infection will not be passed on to children if parents-to-be are not infected with HIV. Primary prevention strategies include the following components:

Safer and responsible sexual behaviour and practices

Safe and responsible sexual behaviour and practices include, as appropriate, delaying the onset of sexual activity, practising abstinence, reducing the number of sexual partners, and using condoms.

Trainer Instructions

Slide 15

While the main focus of this programme is on Element 3 (Prevention of HIV transmission from women who are HIV-infected to their infants) and Element 4 (Provision of treatment, care, and support to women who are HIV-infected, their infants and their families), special attention is given to preventing HIV infection in parents-to-be, as outlined below.

This approach has come to be known as the "ABC" approach.

A = Abstinence—Refrain from having sexual intercourse.
B = Be faithful—Be faithful to one partner not infected with HIV.
C = Condom use—Use condoms correctly and consistently.

Recent reports of increasing new HIV infections transmitted from husbands to wives indicate a continued need to educate people about safer sex practices and other behaviour changes. For example, being faithful to one partner not infected with HIV is a partner reduction behaviour that has proven significant in slowing the spread of HIV infection.

Behaviour change communication (BCC) efforts aim to change the behaviours that place individuals at risk for becoming HIV-infected or spreading HIV infection. BCC recognises that behaviour change is not simply a matter of increased knowledge. Many factors, including family, church and community, influence change. BCC attempts to create a household, community, and health facility environment whereby individuals can modify their behaviour to decrease risk.

Factors contributing to women's vulnerability to HIV include poverty, lack of information, abuse, violence, and coercion by men who have several partners.

Especially among young women, the successful implementation of the "ABCs" outlined above may require support from organised programs. Healthcare workers can help women address these challenges through education and community linkages.

Trainer Instructions

Introduce the four prevention strategies outlined below.

Provide access to condoms.

Condoms can help prevent HIV transmission when used correctly and consistently, especially in high-risk settings. Programmes that promote condom use for HIV prevention should also focus on condom use for PMTCT.

Provide early diagnosis and treatment of STIs.

The early diagnosis and treatment of STIs can reduce the incidence of HIV in the general population by about 40%. STI treatment services present an opportunity to provide information on HIV infection, MTCT, and referral for testing and counselling.

Make HIV testing and counselling widely available.

HIV testing and counselling services need to be made available to all women of childbearing age because PMTCT interventions depend on a woman knowing her HIV status.

Provide suitable counselling for women who are HIV-negative.

Counselling provides an opportunity for a woman who is HIV-negative to learn how to protect herself and her infant from HIV infection. It can also serve as powerful motivation to adopt safer sex practices, encourage partner testing, and discuss family planning.

Trainer Instructions

Summarise the lessons from Element 1.

To review primary prevention of HIV, lead the group in the interactive game described on the next page.

Exercise 2.3 Interactive group game: STI handshake	
Purpose	To explore the concept of HIV and STI transmission—both with and without the use of protection—when individuals are sexually active with multiple partners.
Duration	30 minutes
Introduction	Begin by explaining to participants that you have an interesting exercise for them. The purpose of the exercise will be clear upon completion.
	PART 1

Activities	▪ Instruct each participant to:
	  ▪ Take one piece of paper from the basket/box/paper bag, but do not look at it.
	  ▪ Shake hands with three other people in the group, and remember whom you shook hands with.
	▪ When everyone has shaken hands with three people, ask them to return to their seats and unfold their pieces of paper.
	▪ Explain that most pieces of paper will be blank. Two people will have marked papers. Ask the participants with the paper labelled “HIV” to stand. Ask those with papers labelled with the common STI to stand. Explain that these people represent someone who is infected. Explain that the group will pretend that their handshakes represented sexual intercourse or some other risky sexual contact.
	▪ Ask everyone who shook hands with the person holding the "HIV" paper to stand. Ask those who shook hands with the person holding the "STI" paper to stand.
	▪ Now ask the people still seated if they shook hands with any of the new people standing. Ask them to stand as well.
	▪ Continue this process until all the people who could have contracted the infectious disease have been identified and are standing.
	▪ Stress that this is only an exercise: In real life, people make conscious decisions about whether or not to engage in risky behaviour.

Debriefing	Engage the group in discussion by asking: ▪ What did you learn from this activity? ▪ Why did the disease spread so quickly? ▪ How can we slow the spread of STIs? ▪ How can we slow the spread of HIV?

PART 2	

Activities	▪ Ask participants to refold their pieces of paper. Collect the paper strips, starting with those marked with "HIV" or "STI."
	▪ Place into the empty basket/box/paper bag the following items:
	  ▪ The original strips marked with "HIV" and "STI"
	  ▪ The two strips from the "extra " pile marked "condom" or "abstinence"
	  ▪ Enough paper strips to total the number of participants in the group
	▪ Shake basket/box/bag and have each participant draw one piece of folded paper, keep it folded, and shake hands with three people as before. When they are finished shaking hands, they should return to their seats and unfold their papers.
	▪ Ask those with the paper marked "HIV" or "STI" to stand.
	▪ Ask participants who shook hands with those people to stand.
	▪ Ask anyone who shook hands with any of the people standing to stand as well.
	▪ Identify participants with the papers marked "condom" or "abstinence." Ask them to sit down. Then ask any participants who shook hands with these two people to sit down as well.
	Note to Instructor: There should be significantly fewer people standing in Part 2 of this exercise than in Part 1.

Debriefing	Start the discussion by asking the following questions: ▪ What happened this time? ▪ How did the use of condoms or abstinence affect the risk of contracting an infectious disease in this group? End the activity by recording participants' feelings about the exercise on the flipchart, whiteboard, or blackboard. Ask the following questions: ▪ How did you feel shaking hands in Part 2? ▪ How did you decide whom to shake hands with? ▪ Can you think of another way to prevent an STI besides condoms or abstinence (eg, mutual monogamy with a non-infected person)? ▪ What is the effect of multiple partners on the STI rate?

Trainer Instructions

Slide 16

Introduce Element 2, as described below.

Element 2 Prevention of unintended pregnancies among women infected with HIV

With appropriate support, women who know they are HIV-infected can avoid unintended pregnancies and therefore reduce the number of infants at risk for MTCT.

The rapid spread of HIV has made access to effective contraception and family planning services even more important throughout the world. Most women in resource-constrained settings are unaware of their HIV status. Access to family planning counselling and referral for women known or suspected to be HIV-infected and their partners is critical in preventing unintended pregnancies. Such counselling also provides an opportunity to discuss related risks, both present and future, and is a vital component to reducing maternal and child morbidity and mortality.

- *Effective family planning can help prevent unintended pregnancies and help women who are HIV-infected protect their own health while taking care of their families.*
- Providing safe and effective contraception and high-quality reproductive health counselling contribute to informed decision-making about pregnancy choices

Trainer Instructions

Slide 17

Summarise the lessons from Element 2.

Element 3 Prevention of HIV transmission from women infected with HIV to their infants

PMTCT usually refers to specific programs to identify pregnant women infected with HIV and to provide them with effective interventions to reduce MTCT.

Element 3 in this module provides an overview of PMTCT. Module 3 discusses PMTCT interventions in detail.

Specific interventions to reduce HIV transmission from an infected woman to her child include HIV testing and counselling, antiretroviral prophylaxis and treatment, safer delivery practices, and safer infant-feeding practices. When an ARV drug is given to mother and infant to prevent MTCT, it is referred to as ARV *prophylaxis*.

Note: This curriculum focuses on women infected with HIV-1; *Appendix 2-A* provides information about PMTCT services for women infected with HIV-2.

Refer to the *Pocket Guide*

Make These Points

- Reiterate the key interventions for reducing the risk of MTCT listed below.

PMTCT core interventions

- HIV testing and counselling
- Antiretroviral treatment and prophylaxis
- Safer delivery practices
- Safer infant-feeding practices

How these interventions work

- Identify women infected with HIV.
- Reduce maternal viral load.
- Reduce infant exposure to the virus during labour and delivery.
- Reduce infant exposure to the virus through safer feeding options.

Ways to reduce risk of MTCT

- HIV testing and counselling
- Antiretrovirals
- Elective cesarean section, where safe and feasible
- Safer delivery practices
- nfant-feeding counselling for safer feeding practice
- Early termination of pregnancy, where safe and legal

Trainer Instructions

Discuss global trends in MTCT.

In industrialised countries where women infected with HIV receive triple drug ARV treatment and do not breastfeed—and where elective cesarean sections are safe, feasible, and commonly performed—the rate of MTCT has been reduced to about 2%.

ARV prophylaxis can reduce MTCT by 40–70%. The impact is greater (closer to 70%) when women do not breastfeed, because current ARV prophylaxis regimens only prevent HIV transmission during the early breastfeeding period. Studies are ongoing to determine whether ARV prophylaxis for mother or child during breastfeeding can help reduce the risk of HIV transmission during that period.

Refer to the *Pocket Guide*

Partner involvement in PMTCT

PMTCT efforts should be as comprehensive as possible and acknowledge that both mothers and fathers have an impact on transmission of HIV to the infant:

- Both partners need to be aware of the importance of safer sex throughout pregnancy and breastfeeding.
- Both partners should be tested and counselled for HIV.
- Both partners should be made aware of and provided with PMTCT interventions.

Trainer Instructions

Summarise the lessons from Element 3.

As a lead-in to the next slide, remind group of the following fact.

ARV prophylaxis for the mother

ARV prophylaxis given to a pregnant woman who is HIV-infected does not confer long-term benefits to the woman herself. Pregnant women with advanced HIV infection require combination ARV treatment to reduce the risk of AIDS-related illness. As treatment becomes more available, there should be integration between treatment and prophylaxis services.

Trainer Instructions

Slide 18

Introduce Element 4, as described below.

Element 4 Provision of treatment, care, and support to women infected with HIV, their infants and their families

Programmes for the prevention of HIV in infants and young children will identify large numbers of women infected with HIV who will need special attention. Medical care and social support are important for women living with HIV/AIDS to address concerns about both their own health and the health and future of their children and families.

If a woman is assured that she will receive adequate treatment and care for herself, her children, and her partner, she is more likely to accept HIV testing and counselling and, if HIV-positive, interventions to reduce MTCT.

It is important to develop and reinforce linkages with programmes for treatment, care, and support services to promote long-term care of women who are HIV-infected and their families.

Treatment, care, and support services for women

Services for women include the following:

- Prevention and treatment of opportunistic infections
- ARV treatment
- Treatment of symptoms
- Palliative care
- Nutritional support
- Reproductive health care, including family planning and counselling
- Psychosocial and community support

Care and support of the infant and child who are HIV-exposed

Children whose mothers are infected with HIV are at higher risk than other children for illness and malnutrition for multiple reasons:

- They may be infected with HIV and become ill—even when adequate health care and nutrition are provided.
- Those who receive replacement feeding lack the protective benefits of breastfeeding against gastroenteritis, respiratory infections, and other complications.
- If their mother is ill, she may have difficulty caring for them adequately.
- Their families may be economically vulnerable due to AIDS-related illnesses and deaths among adult relatives.

Nutritional support for the infant or child who is HIV-exposed

- Support the mother's infant-feeding choice.
- Provide education on hydration and early reporting of diarrhoea.
- Monitor for growth and development.
- Monitor for signs of infection that can alter feeding patterns.

Infants and children who are HIV-exposed require regular follow-up care—especially during the first 2 years of life—including immunisations, HIV testing, and ongoing monitoring of feeding, growth, and development (See *Module 7: Linkages to Treatment, Care, and Support for Mothers and Families with HIV Infection*).

Trainer Instructions

Inform the group that these issues will also be addressed in *Module 7: Linkages to Treatment, Care, and Support for Mothers and Families with HIV Infection.*

Summarise the lessons from Element 4.

SESSION 4 Role of Maternal and Child Health Services in the Prevention of HIV Infection in Infants and Young Children

Advance Preparation

No additional preparation is required for this session.

Total Session Time: 15 minutes

Trainer Instructions

Slides 19 and 20

Instruct the group to refer to the materials on in-country policies and programmes.

Discuss the mutually supporting functions of MCH, PMTCT, and antenatal care services.

Maternal and child health services

HIV infection is one of the most important health problems for pregnant mothers and newborns in many developing countries. PMTCT programmes need to be integrated as an essential part of MCH care.

MCH care encompasses a broad range of educational and clinical services that help mothers, their children, and their families lead healthy lives. *Although all four elements of a comprehensive PMTCT programme are important, antenatal care is the most common entry point for women into those programmes.* MCH programmes facilitate PMTCT by providing:

- Essential antenatal care
- Family planning services
- ARV treatment and prophylaxis
- Safer delivery practices
- Counselling and support for the woman's chosen infant-feeding method

All mothers and infants will benefit from integrating PMTCT into existing MCH care services. Many elements of PMTCT programmes parallel and complement initiatives that are in development or are already offered by providers of quality antenatal care (eg, Safer Motherhood, Baby Friendly Hospitals, Baby Feeding, and Saving Newborn Lives).

Trainer Instructions

Provide an overview of comprehensive MCH services, as described in the box below.

Make These Points

- Effective integration of PMTCT into postnatal MCH services is likely to strengthen maternal care, infant care, and family care.

Comprehensive MCH services

- Recognise that the best approach to preventing HIV infection in infants and children begins with prevention of primary infection in parents-to-be.
- Provide information to prevent unintended pregnancies in both women who are HIV-positive and high-risk women with unknown status.
- Provide education in early recognition and treatment of STIs.
- Provide education about reducing the risk of MTCT.
- Link and refer patients to health care and community services that include the following:
  - HIV testing and counselling
  - Nutritional care
  - ARV treatment
  - Psychosocial and/or spiritual support (such as support groups for women with HIV)
  - Treatment of symptoms
  - Palliative care
  - Economic assistance
- Educate patients about how to recognise symptoms of opportunistic infections and measures they can take to prevent such infections.
- Educate patients about how to recognise early signs and symptoms of HIV infection in the infant or child.

Integration of PMTCT into postnatal MCH services

Effective integration of PMTCT into postnatal MCH services is likely to strengthen maternal care, infant care, and family care.

- MCH postpartum care services help protect the mother's health by providing medical and psychosocial supportive care.
- MCH postnatal care services offer assessment of infant growth and development, nutritional support, immunisations, and early HIV testing. If the infant is HIV-infected, additional support services may include ARV treatment.
- MCH services provide social support, HIV testing, and counselling for family members, referrals to community-based support programmes, and assistance with contending with stigma.

The PMTCT programme

A comprehensive PMTCT programme provides the continuum of care for mother and child.

The continuum begins with educating adolescent women about primary prevention of infection and continues through treatment, care, and support to women who are HIV-positive and their families.

PMTCT programmes ensure women receive education and services to reduce risk of MTCT throughout pregnancy, labour and delivery, and infant feeding. They also provide support for both mother and child, especially during the crucial years of childhood growth and development. This comprehensive approach ultimately provides linkages to existing community services to address the complex needs and issues involved in HIV prevention, treatment, and management.

Trainer Instructions

Slides 21, 22 and 23

Summarise key points for Module 2, as presented in the box below.

Module 2: Key Points

- A comprehensive approach is needed to prevent HIV infection in infants and young children.
- The 4 elements of the comprehensive approach to PMTCT are:
  - Primary prevention of HIV infection
  - Prevention of unintended pregnancies in women infected with HIV
  - Prevention of HIV transmission from women infected with HIV to their infants
  - Provision of treatment, care and support to women infected with HIV, their infants and their families
- Without intervention the risk of MTCT is 25-40%.
- Combination interventions can reduce the MTCT rate by up to 40% in breastfeeding populations.
- Because ARV prophylaxis alone does not treat the mother's infection, ongoing treatment, care, and support are needed.
- MCH services can act as an entry point to the range of services that provide treatment, care, and support to the woman who is HIV-positive and affected family members.
- Linkages to community services can enhance treatment, care, and support.

APPENDIX 2-A MTCT services for the woman who is HIV-2 infected

The woman infected with HIV-2 should have access to the entire range of antenatal, labour and delivery, and postnatal services as well as linkages to other services designed for women infected with HIV-1. Offering the mother infected with HIV-2 short-course ARV prophylaxis to prevent MTCT should follow national and local policy, if such a policy statement exists.

The following information, adapted from the CDC (October 1998) provides pertinent background on HIV-2 for consideration:

- HIV-2 infections are predominantly found in West Africa.
- HIV-2 infections:
  - Have the same modes of transmission as HIV-1
  - Also progress to AIDS
  - Are associated with similar opportunistic infections
  - Appear to be less transmissible from mother to child than HIV-1
  - Develop more slowly and appear less virulent than HIV-1

- Testing for both HIV-1 and HIV-2 should be considered in the following situations:
  - In settings where HIV-2 is present
  - When illnesses (such as opportunistic infections) appear in someone whose HIV-1 test is negative
  - When an HIV-1 Western blot indicates certain indeterminate test band patterns

- The best approach to clinical treatment of HIV-2 is unclear. The following factors, however, should be considered:
  - Non-nucleoside reverse transcriptase inhibitors (NNRTIs), such as nevirapine, are not as effective against HIV-2. Therefore, zidovudine therapy should be considered for expectant mothers who are infected with HIV-2 and their newborn infants to reduce MTCT risk, especially for women who become infected during pregnancy.
  - Treatment response is more difficult to monitor than in women infected with HIV-1. CD4 counts and physical signs of immune deterioration are currently being used for monitoring.
  - The woman's wishes: the healthcare provider should have a frank discussion with the woman infected with HIV-2 to explain the prevailing policy and practice and to support her in making a decision with which she is comfortable.
  - Continued surveillance to monitor the spread of HIV-2 is necessary.

Infant Feeding

The woman infected with HIV-2 should be advised to follow national and local infant-feeding recommendations for women infected with HIV-1.

Notes